YEIP
93-067 1993

REPORT FOR YUKON MINING INCENTIVES PROGRAM FILE \# 93-067
N.T.S. AREAS

105-E-1;
105-E-14;
115-I-2; 115-I-3.

## Introduction

This report describes the results of a hard rock reconnaissance prospecting program carried out over a widespread area of crown land in three principal locations. They are listed as follows, and for the purposes of this report, will be referred to by their geographical names only:
1)Claire 'Lake Area (105-E-14)
2) Loon Lakes Area (105-E-1)
3)Victoria Mountain Area (115-I-3 and -4)

## Description, Location, and Access of Prospecting Areas

The Claire Lake Area is centred on Claire Lake, approximately 80 miles north of Whitehorse. Loon Lakes Area is situated in the Pelly Mountains, 40 miles north-east of Whitehorse. These first two areas are accessible by float equipped aircraft only. The third area, Victoria Mountain, is accessible by a secondary road from the town of Carmacks, 30 miles to the east.

Claire Lake and Loon Lakes are areas of high relief and low outcrop exposure. Both areas are surrounded by hills in excess of 2000 ft . above the level of the lake. Outcrop is exposed primarily in deeply cut stream channels and also at the tops of the mountains. Both of these factors restricted our prospecting activities, but did not make them impossible.

The third area, Victoria Mountain, had better outcrop exposure and more gentle relief due to the fact that we were able to drive nearly to the top of the Klondike Plateau in our vehicle.

## Geology - Claire Lake Area

All terranes accessible by boat or by foot from Claire Lake lie within the Tatchun Belt, a relatively thin (less than 10 miles ) unit composed of Jurassic and Upper Triassic sub-aerial volcanic assemblages - primarily intermediate tuffs, agglomerates, and breccias, with some flows, porphyrys and volcanogenic sediments. These are the same rocks which host most of the epithermal precious metal deposits in the intermontane belt.

Observations made during this prospecting program confirm the presence of these rock types (see Claire Lake maps 1,2 , and 3 enclosed). Most of the rocks examined were extensively altered mechanically. Fault breccias, mylonites, extensive local block faulting and pervasive carbonate alteration all confirm that Claire Lake and environs lie within a major north-west trending fault zone -- the "Claire Lake Fault".

## Geology - Loon Lake Area

The Loon Lakes Area was selected as a prospecting target because it lies in a favourable geological horizon with lots of unstaked land along strike from an excellent known copper-gold showing.

Quoting from Minfile \#105-E-003 "Copper mineralization strikes N. 020 degrees $E$. , parallel to a major fault (Teslin Suture Zone) that lies 3.2 km . to the east. This trend is slightly oblique to the strike of the host rocks, which consist of highly foliated Late Triassic to Early Jurassic chlorite-serecite-quartz schist and cherty quartzite."

The prospect, shown as staked on map 4, "Loon Lakes", has been extensively drilled and trenched. There also are two adits. Dump material consisting of quartz with chalcopyrite have assayed as high as $44.6 \mathrm{~g} /$ ton $\mathrm{Au} ., 144.0 \mathrm{~g} /$ ton $\mathrm{Ag} .$, and $10 \% \mathrm{Cu}$.

Observations made during this prospecting program indicate that regionally the rocks appear to be dacite flows, chlorite schists, limestones (to the south-west), and slates. Mineralization occurs in small gossans in chlorite schists and quartzites.

## Geology - Victoria Mountain Area

The Victoria Mountain/Mt. Nansen Area was chosen as a final prospecting area because of its extensive easy accessibility in the form of the secondary road network which extends westward from Carmacks. This area thus became the reconnaissance part of the program, allowing us to familiarize ourselves with a wide variety of Yukon stratigraphy's - primarily within the Yukon Cataclastic Terrane.

Regionally, around Victoria Mt./Mt. Nansen, the rocks are quartzfeldspar porphyrys and felsic volcanic feldspar porphyrys with secondary subvolcanic felsic intrusives. To the east, toward Victoria Creek and Rowlinson Creek (map 5) the rocks grade into granite and dioritic gneiss and then into mature palaeozoic sediments such as sandstones, shales and grey wackes.

The gneiss located east of Victoria Creek (Map 5) became a primary target only after we had done some preliminary prospecting work.

These gneiss are located on ground recently released from staking and located favourably just to the east of the Mt. Nansen Mine described by Minfile \# 115-I-065 as follows: "the mineralized veins are in strong shear zones that cut highly altered Palaeozoic schist and gneiss intruded by dykes and stocks of Lower Cretaceous porphyry." Reserves on the property are estimated at 1,000,000 tons grading $9.4 \mathrm{~g} / \mathrm{ton} \mathrm{Au}$ and $190 \mathrm{~g} / \mathrm{ton} \mathrm{Ag}$ (B.Y.G. Natural Resources Inc. Annual Report, 1989, pg.6)

## Mineralization

As a result of this prospecting program, thirty-one rock samples were sent in for analyses for precious and/or base metals. Sample descriptions and assay certificate are enclosed. Of these, only one returned anomalous (L-2) $2282 \mathrm{PPM} \mathrm{Cu}, 903 \mathrm{ppm} \mathrm{Pb}$. This sample was taken from the Loon Lakes area (map 4) and represents a newly discovered extension of the known mineralized zone for a further 800 metres to the north.

## Conclusions

The Claire Lake Area displayed a distinct lack of mineralization. The few sulphides which were found contained no anomalous metal values. This fact, along with difficult topography and a dearth of rock exposure leads me to abandon this area as an exploration target.

The Victoria Mountain area is well mineralized regionally, but is extensively staked. Unstaked ground which we prospected yielded no appreciable mineralization. The area immediately south of Victoria Mountain (map 6) was so barren that no rock samples were assayed.

The Loon Lake area holds merit as a target for follow-up staking and detailed geological mapping. The sample ( $\mathrm{L}-2 ; 0.25 \%$ copper) is highly anomalous and comes from open ground along strike from the zone of mineralization and within the same rock type as the original discovery.

|  |  |  |
| :---: | :---: | :---: |
|  | SAMPLE\# | Au* ppb |
|  | $\begin{aligned} & C-1 \\ & C-2 \\ & c-3 \\ & c-4 \\ & C-5 \end{aligned}$ $\begin{aligned} & C-6 \\ & C-7 \\ & C-10 \\ & C-11 \\ & C-12 \end{aligned}$ $\begin{aligned} & \mathrm{C}-14 \\ & \mathrm{C}-15 \\ & \mathrm{~L}-1 \\ & \mathrm{~L}-6 \\ & \mathrm{RH}-1 \end{aligned}$ $\begin{aligned} & \mathrm{RH}-2 \\ & \mathrm{RH}-3 \\ & \mathrm{RE} \mathrm{RH}-3 \\ & \mathrm{RH}-4 \\ & \mathrm{RH}-5 \end{aligned}$ $\begin{aligned} & \mathrm{RH}-8 \\ & \mathrm{RH}-9 \\ & \mathrm{RH}-10 \\ & \mathrm{RH}-11 \\ & \mathrm{RH}-12 \end{aligned}$ <br> STANDARD AU-R | $\begin{aligned} & 1250 \\ & 5 \\ & 5 \\ & 1 \\ & 2 \text { not from Yukon. } \\ & 1 \\ & 2 \\ & 1 \\ & 8 \\ & 7 \\ & 3 \\ & 28 \\ & 17 \\ & 7 \\ & 1 \\ & 2 \\ & 1 \\ & 3 \\ & 2 \\ & 2 \\ & 2 \\ & 510\end{aligned}$ |
| - SAMPLE TYPE: ROCK <br> DATE RECEIVED: SEP 131993 DATE | AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMP <br> REPORT MAILED: | Samples beginn199 'RE' are duplicate samples. <br> BY. -D.toye, C.LEONG, J. hang; CERTIFIED B.C. ASSAYERS |


| ACME ANA |  |  |  |  |  |  | 852 E. HASTINGS SI. VANCOUVER B.C. V6A 1R6 GEOCHEMICAL ANALYSIS CERTIFICATE <br> Randy Hodgson File \# 93-2427 Page 1 5674 Marlatt AVe, Powelt River BC VAA 4E7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SAMPLE\# | $\begin{array}{r} \text { Mo } \\ \text { ppm } \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Cu} \\ \mathrm{ppm} \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Pb} \\ \mathrm{ppm} \end{array}$ | $\begin{array}{r} 2 n \\ p p m \end{array}$ | $\begin{array}{r} \mathbf{A g} \\ \text { ppm } \\ \hline \end{array}$ | $\begin{gathered} \mathrm{Ni} \\ \mathrm{ppm} \end{gathered}$ | $\begin{array}{r} \text { Co } \\ \text { pppm } \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Mn} \\ \mathrm{ppm} \end{array}$ | $\begin{gathered} \mathrm{Fe} \\ \% \end{gathered}$ | $\begin{array}{r} \text { As } \\ \text { ppm } \end{array}$ | $\begin{array}{r} U \\ \mathrm{ppm} \\ \hline \end{array}$ | $\begin{array}{r} \mathrm{Au} \\ \mathrm{ppm} \\ \hline \end{array}$ | $\begin{aligned} & \text { Th } \\ & \text { ppm } \end{aligned}$ | $\begin{gathered} \text { sr } \\ \text { ppm } \end{gathered}$ | $\begin{array}{r} \mathrm{cd} \\ \mathrm{ppm} \\ \hline \end{array}$ | $\begin{array}{r} \text { sb } \\ \text { ppm } \end{array}$ | $\begin{array}{r} \text { Bi } \\ \text { ppm } \\ \hline \end{array}$ | $\begin{array}{r} v \\ p p n \end{array}$ | $\begin{gathered} \mathrm{Ca} \\ \% \\ \hline \end{gathered}$ | $\begin{aligned} & \hline p \\ & \% \\ & \hline \end{aligned}$ | $\begin{array}{r} \text { La } \\ \text { ppm } \\ \hline \end{array}$ |  | $\begin{gathered} \mathbf{M g} \\ \mathbf{\%} \\ \hline \end{gathered}$ |  | $\begin{array}{r} \mathrm{Ti} \\ \mathbf{\%} \\ \hline \end{array}$ |  | $\begin{gathered} \mathrm{Al} \\ \% \end{gathered}$ | $\begin{gathered} \mathrm{Na} \\ \boldsymbol{x} \end{gathered}$ | k <br> $\%$ | $\begin{array}{r} \mathbf{6} \\ \text { ppm } \end{array}$ |
| $\mathrm{C}-13$ $\mathrm{~L}-2$ $\mathrm{~L}-3$ $\mathrm{~L}-4$ $\mathrm{~L}-5$ | 4 4 2 3 2 | 19 2282 40 144 24 | 15 903 42 2 18 | 66 66 44 58 29 | . 2 .6 .1 $<.1$ $<.1$ | 11 13 18 19 17 | 2 2 3 4 4 | 237 101 193 240 86 | 1.13 .76 2.78 3.97 .97 | 2 6 5 9 6 | $<5$ $<5$ $<5$ $<5$ $<5$ | $<2$ $<2$ $<2$ $<2$ $<2$ | 3 42 4 10 11 | 34 2 32 3 4 | .5 .4 $<.2$ .5 .4 | 2 2 $<2$ $<2$ 2 | $<2$ 13 2 $<2$ $<2$ | 13 $<2$ 6 8 8 2 | .79 .06 .08 .02 .05 | .013 .006 .024 .010 .008 | 7 $<2$ 13 13 6 10 | 33 12 18 36 12 | .15 .04 .53 .86 .14 | 154 13 41 46 51 | .01 $\times .01$ .04 .01 $<.01$ | 7 2 5 5 3 | .24 .15 .11 .60 .46 | .04 .01 .01 .01 .02 | .11 .02 .13 .17 .18 | 1 $<1$ 2 2 1 1 |
| L-7 L-8 <br> RE L-8 <br> RH-7 <br> STANDARD C | $\begin{array}{r} 1 \\ 2 \\ 2 \\ 2 \\ <1 \\ 18 \end{array}$ | $\begin{array}{r}30 \\ 11 \\ 12 \\ 166 \\ 57 \\ \hline\end{array}$ | 22 $<2$ $<2$ $<2$ 37 | $\begin{array}{r}104 \\ 59 \\ 58 \\ 30 \\ 122 \\ \hline\end{array}$ | .2 $<.1$ $<.1$ .2 6.7 | 11 36 37 21 67 | 5 11 11 30 28 | 183 319 317 906 1048 | 2.27 5.18 5.17 4.92 3.96 | $\begin{array}{r}7 \\ 6 \\ 7 \\ 30 \\ 42 \\ \hline\end{array}$ | $<5$ $<5$ $<5$ $<5$ 19 | $<2$ $<2$ $<2$ $<2$ 7 | 11 13 13 $<2$ 37 | 4 30 31 45 52 | $<.2$ $<.2$ $<.2$ $<.2$ 18.2 | $<2$ $<2$ $<2$ $<2$ 14 | $<2$ $<2$ 2 $<2$ 21 | 28 <br> 17 <br> 17 <br> 131 <br> 56 | 1.29 .18 .18 3.80 .51 | .016 .071 .072 .009 .086 | $\begin{array}{r}6 \\ 53 \\ 54 \\ 2 \\ 36 \\ \hline\end{array}$ | 12 46 44 34 56 | .51 .142 1.41 2.09 .90 | 43 <br> 87 <br> 83 <br> 17 <br> 190 | .09 .01 .01 $<.01$ .09 | $\begin{array}{r}5 \\ 2 \\ 4 \\ 8 \\ 35 \\ \hline\end{array}$ | .47 .29 .30 .87 .88 | .02 <br> .01 <br> .01 <br> .06 <br> .06 | .15 .16 .17 .05 .14 | $\begin{array}{r} 1 \\ <1 \\ 2 \\ 2 \\ 21 \\ \hline \end{array}$ |
| icp - . 500 gram sample is digested hith 3ml 3-1-2 hcl-hno3-h2o at 95 deg. c for one hour and is diluted to 10 ml hith hater. this leach is partial for mn fe sR ca p la cr mg ba ti b hand limited for na $K$ and al. <br> ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS $>1 \%$, AG $>30$ PPM \& AU $>1000$ PPB <br> - SAMPLE TYPE: ROCK Samples beginning.'RE' are duplicate samples. <br>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Assay Rock Descriptions

| RH1 | Peridotite, incipient serpentines, minor pyrite |
| :---: | :---: |
| RH2 - | Felsic porphyry - rusty |
| RH3 - | Pale green find grained ryolite feldspar crystal flow minor pyrite |
| RH4 - | Fault breccia - quartzite and/or ryolite with chlorite and carbonate |
| RH5 - | Rusty felsic sediment?? - chert beds, sperulites?, mylonite? |
| RH6 - | No assay. |
| RH7 - | Pale grey dacite - locally $10 \%$ py.,cpy?, assay for Au, $\mathrm{Ag}, \mathrm{Cu}$. |
| RH8 - | Dark quartz - feldspar porphyry with pyroxenes?, 10\% py. blebs. |
| RH9 - | Felsic fault breccia - chert stockwerke, carbonate, 5\% py. - mylonitic textures. |
| RH10 - | Gossan in fault zone - mylonite - rock type unknown. |
| RH11 - | Conglomerate with quartz veins. |
| RH12 - | Gossan - py. |

L-1- chlorite schist - minor py. - south Loon, east side.
L-2- quartzite - 10\% cpy.
L-3- rusty quartz vein.
L-4- dark quartzite - minor py.
L-5- rusty quartz - feldspar porphyry.

L-6- sediment from creek at Loon summit.
L-7- rusty quartzite.
L-8- quartz - chlorite - pyrite schist.

C-1- shear in sediments on road into area.
C-2- sample not from Yukon.
C-3- rusty sediments.
C-4- andesite with $10 \%$ py. (east side of Loon Lake).
C-5- soil sample adjacent to gneiss outcropping.
C-6- gneiss.
C-7- quartz-vein in gneiss.
C-11- quartzite with sulfides.
C-12- quartzites with lots of py.
C-13- quartz vein in sediments.
C-14- bedded sulfides in quartzites.
C-15 - quartz porphyry with disseminated pyrite (Mt. Nansen type-
sample).
-

## DATE DUE

Index for Maps

1) Mafic volcanic
(a) flow
(b) fuff.
(c) chlorite schist.
2) Intermediate volcanic (a) flow
(b) hiff
3) Felsic volcanic (a, flow
(b) tuff.
4) Sedimeints (a) Sandstone
(i) conglowerate
(s) shate
(d) arkose.
5) Intrusive.

Symbols
-RH\#'s, L\#'s, C\#'s $\rightarrow$ sample locations

- Q.EP - quadz-feldspar porphryy
$\therefore$ outcrop
se vidge
o/s suerburden
- swamp

人 $A$ strike + dip (bedding, rolation)
$\sim \ldots$ mitermittent stream
$\cdots \rightarrow-$ location + direchow of prospecto $t m m$
bx, breccia
spheri spherulite







Creblog - based on G.S.C. map 1505A-Tectoric assemblage pthe Condiltera
 IFI-upar Triassic iower Ju wasse hasi nolcancos porpayyy) sedimants



